



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,276	03/04/2004	Noriyasu Kashima	008312-0308609	4212
909	7590	01/26/2006	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN, LLP			GOLUB, MARCIA A	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	
			2828	

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

512

Office Action Summary	Application No. 10/792,276	Applicant(s) KASHIMA ET AL.	
	Examiner Marcia A. Golub	Art Unit 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/4/04, 12/5/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5, 6, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pillai (6,212,216), and further in view of Tomohisa (JP 2001-194563).

Regarding **claim 1**, Figs 1,3,4,11 of Pillai discloses "a laser apparatus comprising:

a semiconductor laser element [10,28,38,41] which emits a light beam with a spread in a slow-axis direction and a fast- axis direction, (2/60-62)

a fast-axis collimating lens [48,81] which controls the spread in the fast-axis direction of the light beam emitted from the semiconductor laser element (4/16-17)

a reflector [26,36,46] which returns the light beam emitted in the slow-axis direction in a specific angle range to the semiconductor laser element, (Fig 3)

Pillai does not disclose "a reflector supporting member which supports the reflector, and a side support member which supports the fast-axis collimating lens and the reflector supporting member in the slow-axis direction with respect to the semiconductor laser element."

However, optical supporting members are well known in the art. Fig 1 of Tomohisa discloses a semiconductor laser module that includes a laser [5], lenses [7,17] and supporting members [15,16, 20,22,24]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Tomohisa into the device disclosed by Pillai by placing the laser, the lenses and the reflector on supporting members. The ordinary artisan would have been motivated to modify the device of Pillai in the manner set forth above for at least the purpose of providing a laser module with a fixed, stable output.

Regarding **claim 5**, Pillai and Tomohisa disclose a laser apparatus as described above further comprising:

“a slow-axis collimating lens [83] which controls a spread in a slow-axis direction of a light beam emitted from the laser apparatus;(7/14-16)

and optical fiber [22,32,42] to which the light beam is directed,”

Tomohisa further discloses using “a condenser lens [7] which condenses a light beam passed through the slow-axis collimating lens and directs the beam to the optical fiber [8]”;

“ the optical axis [18] of the slow-axis collimating lens, the optical axis of the condenser lens, and the optical axis of the optical fiber are fixed in such a manner that they coincide with a direction which, together with the direction [20] of the light beam reflected from the reflector, symmetric with respect to the central axis of the semiconductor laser element [10].” (3/18-19, Fig 1 of Pillai)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Tomohisa into the device disclosed by Pillai and Tomohisa by adding a condensing lens. The ordinary artisan would have been motivated to modify the device of Pillai and Tomohisa in the manner set forth above for at least the purpose of coupling the light into the optical fiber.

Regarding **claims 2 and 6**, Pillai and Tomohisa disclose a laser apparatus as described above "comprising: a mount member [4] on which the semiconductor laser element [5] is to be mounted and which, together with the fast-axis collimating lens [17] and the reflector supporting member, integrally formed." (Fig 1 of Tomohisa)

Regarding **claim 9**, the apparatus disclosed above with regards to claim 1, requires the manufacturing steps and discloses the functions and limitations of the apparatus manufacturing claim 9.

Claims 3, 4, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pillai and Tomohisa as applied to claim 1 above, and further in view of Aoki (5,408,493)

Regarding **claims 3,4,7 and 8**, Pillai and Tomohisa disclose the laser system as described above, but do not disclose that "the fast-axis collimating lens and the reflector supporting member are fixed the mount member with adhesive or are welded to the mount member.

However, the fixing means for attaching the optical components to the support members such as by welding and by application of adhesive are well known in the art and are disclosed by Aoki. (1/66-68)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Aoki into the device disclosed by Pillai and Tomohisa by fixing the collimating lens and the reflector supporting member to the mound member by welding or by applying adhesive. The ordinary artisan would have been motivated to modify the device of Pillai and Tomohisa in the manner set forth above for at least the purpose of creating a permanent and stable connection between the said components.

Contact Info

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcia A. Golub whose telephone number is 571-272-8602. The examiner can normally be reached on M-F 9-6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marcia A. Golub


Minsun Harvey

Application/Control Number: 10/792,276

Page 6

Art Unit: 2828

Assistant Examiner

Art Unit 2828

Supervisor

Art Unit 2828

MAG